

Notice of Allowability

Application No.

09/591,442

Applicant(s)

SMITH, RAIFE F.

Examiner

Fred Ferris

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7 July 2005.
2. ☒ The allowed claim(s) is/are 34-70. *NOW RENUMBERED AS 1-37*
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 9/5/2005
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Handwritten signature and date:
ALF
4/2/20

DETAILED ACTION

1. *This Office Action is responsive to applicant's amendment filed 7 July 2005. Applicants have now cancelled claims 1-33. New claims 34-70 are currently pending in this application and have now been allowed over the prior art.*

Response to Arguments

2. *Applicant's arguments filed 7 July 2005 have been fully considered and found to be persuasive. The previous rejection of claims 1-31 is now moot in view of applicants cancellation of claims 1-33. Claims 34-70 are now allowed over the prior art of record.*

EXAMINER'S AMENDMENT

3. *An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.*

Authorization for this examiner's amendment was given in a telephone interview with Mr. Douglas Swartz on 15 September 2005.

Amend claim 45 with the following:

- *In line 4 of claim 45 **insert** the phrase "**means for**" between "(a)" and "determining".*

*Line 4 of claim 45 should now read: "(a) **means for** determining first and second..."*

- In line 8 of claim 45 *insert* the phrase “**means for generating,**” between “(b)” and “based on”.

Line 8 of claim 45 should now read: “(b) **means for generating,** based on a first...”

- In line 13 of claim 45 *insert* the phrase “**means for generating,**” between “(c)” and “based on”.

Line 13 of claim 45 should now read: “(c) **means for generating,** based on a second...”

- In line 19 of claim 45 *insert* the phrase “**means for**” between “(d)” and “combining”.

Line 19 of claim 45 should now read: “(d) **means for** combining the first and second...”

Allowable Subject Matter

4. Claims 34-70 are allowed over the prior art of record.

The following is an examiner’s statement of reasons for allowance:

Applicants are disclosing a system and method for analyzing the behavior, and characterizing packet interarrival time, of a network by determining total number of packets transmitted over a time interval, and based on mean and variance generating interarrival times representative of the packets. This has been disclosed in the prior art of record.

While certain elements of the claimed invention are individually disclosed in the prior art, the prior art of record does not disclose the specific sequence of method steps

Art Unit: 2128

that includes generating first and second interarrival time based on mean and variance including an admission priority where the first set of packet interarrival times have a substantially lognormal distribution, and the second set of packet interarrival times have a substantially normal distribution, and subsequently combining the first and second set of packet interarrival times to provide a synthetic traffic stream where the packet interarrival time represents the time interval between the arrivals of temporally adjacent individual packets, as now recited in independent claims 34, 45, and 56. (See: specification page 10, line 18 to page 13, line 9, Fig. 3, for example) Here, the claimed normal distribution (i.e. Gaussian distribution) and lognormal distribution (i.e. continuous distribution in which the logarithm of a variable has normal distribution) are interpreted as known to one of ordinary skill in the art. The temporally adjacent individual packets are interpreted using the plain meaning term "temporal". (i.e. meaning the adjacent packets have a "time limited" relationship)

The closest prior art uncovered during examination teaches certain limitations of the claimed invention as follows:

- U.S. Patent 5,583,792 issued to Li et al: teaches characterizing ATM network packet inter-arrival times by measuring inter-arrival time between packets in actual ATM network traffic where the packets contain voice (audio), video, and non-voice or video data. However, Li does not explicitly disclose the interarrival relationship of first and second packet times having lognormal and normal distribution respectively and combining to provide a synthetic traffic pattern as noted above.*

- "Computer Simulation for the Evaluation of Static and Dynamic Priority Schemes in an ATM Multiplexer with Multimedia Traffic", S. Al-Barrak: teaches a simulation model for generating ATM traffic including video, voice, and data packets and the generation of traffic inter-arrival time using normal number distribution. However, Al-Barrak does not explicitly disclose the interarrival relationship of first and second packet times having lognormal and normal distribution respectively and combining to provide a synthetic traffic pattern as noted above.

- "A Measurement-Based Admission Control Algorithm for Integrated Service Packet Networks", S. Jamin: discloses a network simulator inclusive of an inter-arrival time generator. Jamin mentions that the duration of sources can be taken from lognormal distribution but does not actually teach an interarrival packet set with lognormal distribution. Therefore, Jamin does not explicitly disclose the interarrival relationship of first and second packet times having lognormal and normal distribution respectively and combining to provide a synthetic traffic pattern as noted above.

The features noted above relating to the specific sequence of method steps now recited in the independent claims 34, 45, and 56 renders the claimed invention non-obvious over the prior art of record. Dependent claims 35-44, 46-55, and 57-70 are deemed allowable as depending from independent claims 34, 45, and 56 respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached at 571-272-3780. The Official Fax Number is: (703) 872-9306

*Fred Ferris, Patent Examiner
Simulation and Emulation, Art Unit 2128
U.S. Patent and Trademark Office
Randolph Building, Room 5D19
401 Dulany Street
Alexandria, VA 22313
Phone: (571-272-3778)
Fred.Ferris@uspto.gov
September 15, 2005*

FLF
AV 21 25